Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
Distribution of 2004, 2005, 2006, 2007,	)	Docket No. 2012-6 CRB CD 2004-2009
2008 and 2009 Cable Royalty Funds	)	(Phase II) (REMAND)
	)	
In the Matter of	)	
	)	
Distribution of 1999-2009 Satellite	)	Docket No. 2012-7 CRB SD 1999-2009
Royalty Funds	)	(Phase II) (REMAND)
	)	

INDEPENDENT PRODUCERS GROUP'S REPLY IN SUPPORT OF ITS MOTION TO AMEND DIRECT STATEMENT

Worldwide Subsidy Group LLC (a Texas limited liability company) dba Independent Producers Group ("IPG") hereby submits its *Reply in Support of its Motion to Amend Direct Statement*.

A. A CHANGE FROM LINEAR TO LOGARITHMIC RELATIONSHIP IS NOT A "METHODOLOGICAL" CHANGE, CORRECTS A DATA ISSUE, BUT EVEN IF SO CHARACTERIZED, DR. COWAN EXPLAINED THE REASON FOR THE CHANGE.

Review of the SDC and MPAA opposition briefs leaves IPG with the conclusion that such parties did not even consider the majority of arguments and testimony by Dr. Cowan set forth in IPG's motion, or simply desire to mischaracterize that testimony.[1] Not only does IPG again explain on a line-by-line basis the changes between the initially filed Direct Statement and the Amended Written Direct Statement ("AWDS"), Dr. Cowan explains the purpose for the two changes that affected the percentage results, i.e., an improved matching of program titles with

---

[1] In response to numerous misleading assertions set forth in the declarations of Dr. Erdem and Dr. Gray, Dr. Cowan responds with his own declaration. See **Exhibit A**.

1

UNDERSIZED DOCUMENTS

AB did...
__✓__ Docketed (all cases)
__✓__ Store on shared drive
__✓__ Distributed to all
____ Emailed
____ Outlook Updated
____ Service List Updated

compensable broadcasts in his database, and the "linear to logarithmic" relationship change. See

motion at pp. 2-4, Exh. B at paras. 4-14 (Decl. of Cowan).

Despite this, the SDC complains that the changes have yet to be identified, that no

explanation for these changes was articulated, and that the "changes" are incapable of

replication.[2] In fact, while the SDC argue that the differences between the data and processes for

Dr. Cowan's initial and amended reports remain *incapable* of determination (SDC brief at pp. 2,

3),[3] the MPAA argue the opposite, i.e., that the changes are determinable and subject to

calculation (MPAA brief at p. 2, and Gray decl.), but that the Judges should nevertheless

disallow implementation of the "linear to logarithmic" change.

Initially, Dr. Cowan clarifies that when Dr. Erdem and Dr. Gray refer to scaling as a

"method" their statements are simply inaccurate, and that they take liberties with the definitions

employed in the field of statistics, i.e., a revision to *scaling* is not a change in *methodology*. No

response thereto appears in either opposition brief. Rather, both individuals gloss over this fact

---

[2] "IPG has again failed to explain why its change is necessary to correct an error"; "IPG did not provide any documentation that lists the changes . . . ."; "the SDC's expert has been unable to replicate Dr. Cowan's changes"; "Dr. Cowan has never explained why the changed formulas were necessary to correct the data errors." SDC br. at pp. 1, 2, 3.

IPG is unclear what is meant by Dr. Erdem's statement that the "changes" are incapable of replication. Dr. Erdem and the SDC have the "before and after" databases, with all data files and processing files therein, and Dr. Cowan has generally explained which changes were made. Other than an item-by-item identification of which program titles have been matched to which broadcasts, which could be easily determined by the SDC by electronically comparing the pre- and post- list of compensable broadcasts, no greater specificity could be provided. Such a level of micro-detail is not required when amending a direct statement and, in any event, the SDC retain all the databases necessary for making such a comparison.

[3] But see Erdem decl. at para. 12, where Dr. Erdem asserts the opposite: "[H]aving reviewed the data, computer code, and calculations provided to me by counsel for Dr. Cowan's analyses, I can now confirm . . . ."

2

and instead attempt to convince that any change in *formula* necessarily results in a change in *methodology*.[4]

Dr. Cowan further clarifies the *purpose* for each change that affected the percentage results.[5] As should be self-evident, improved "matching" of claimed program titles with compensable broadcasts improves application of any methodology by assuring that all compensable broadcasts are being accurately attributed to a claimant. As was also expressly articulated by Dr. Cowan, in different instances a logarithmic (as opposed to linear) relationship in the applied formula creates a more representative result, i.e., "a better fit". IPG motion, Exh. B at paras. 8-9 ("How I *scale* the dependent variable is dictated by which scaling leads to the best fit of the data . . . .")("[W]hile Dr. Erdem feigns that he is unaware why I would have adjusted the scaling from a linear to a logarithmic relationship between variables, his own example demonstrates the obvious purposes for doing so - - improvement of this particular analysis."). In fact, a change from linear to logarithmic remedies a data issue because, as calculated with negative figures, a linear approach will create nonsensical results. See **Exhibit A** at paras. 11-17.

---

[4] See, e.g., Erdem decl. at para. 12.

[5] Despite Dr. Cowan explicitly articulating the purpose for the changes, the SDC continue with its demonstrably inaccurate allegation that it cannot discern the reason for Dr. Cowan's revisions unless it invades IPG's privileges and sees *all* correspondence amongst Dr. Cowan and IPG's consultants, principals, and legal counsel, even correspondence unrelated to the revision to Dr. Cowan's report. See *SDC Motion to Compel IPG to Produce Documents* (filed Oct. 17, 2016). Therein, the SDC even go so far as to accuse that Raul Galaz is not a consultant for IPG, despite sworn testimony from IPG's principal and Mr. Galaz in these and prior proceedings regarding his status. The SDC literally ask the Judges to engage in a fiction solely in order to peek into IPG's process and communications, and despite already having all databases upon which Dr. Cowan's initial and amended reports relied.

3

As such, the bald allegations of the SDC and MPAA that Dr. Cowan still has not

explained the changes between his initial and amended reports, and the purposes for such

changes, is just patently untrue.

B. THE SDC AND MPAA EACH SAY THEY HAVE BEEN PREJUDICED, BUT ARTICULATE NO PREJUDICE.

MPAA asserts that IPG "sandbagged" the MPAA by revising its claimed percentages, in

order to "sneak in" a new methodology, and that Dr. Cowan's revisions are the product of "IPG's

"similar history of misconduct".[6] MPAA br. at p. 2. However, and as is a matter of record,

IPG's initial submission of an amended direct statement occurred a mere seven (7) business days

after the filing of IPG's Direct Statement, and even prior to the SDC's or MPAA's submission of

their initial discovery requests. Having been filed prior to the issuance of discovery, no

prejudice could have resulted to the SDC or MPAA, as both parties expressly sought from the

outset the production of documents relating to the figures appearing in *both* IPG's original and

amended direct statements, and timely received the electronic backup for *both* IPG's original and

amended direct statements. No issue exists regarding such facts.

Notwithstanding, the MPAA asserts that it has been "prejudiced" because it was

ostensibly required to engage an expert to review the amended report and the changes from the

initial report. Obviously, such is not a *continuing* "prejudice" to the MPAA of the nature that is

of any significance, i.e., to the extent that such can be characterized as "prejudice" it has already

been remedied. Moreover, the MPAA was not *obligated* to compare the differences between the

initial and amended reports since at the time of discovery request and production the amended

---

[6] IPG's ostensible "history of misconduct" is attributed to the alternative methodology asserted by Dr. Robinson in this proceeding, and her revision of her existing methodology in order to incorporate clarifications made by the Judges at the final evidentiary hearing. Such acts hardly constitute "misconduct". MPAA br. at fn. 2.

report was the controlling document, and the database for the amended report was produced at the first stage of discovery. Rather, the MPAA *chose* to compare the differences. As such, the MPAA cannot hoist onto IPG a claim of "prejudice" for an action that it voluntarily *chose* to engage without obligation. Characterizing the MPAA's engagement of an expert to compare changes as "prejudice" would logically mean that *any* amendment "prejudices" an adverse party.

Second, the MPAA alleges that IPG has engaged in a "lack of candor" by refusing to acknowledge a "methodological" change. Indeed, it is the MPAA that has engaged in a lack of candor, trying to characterize *any* change in formula or results as a change in "methodology", an assertion that Dr. Cowan specifically challenges as incorrect and *is not addressed* by either party other than in a conclusory fashion.

Third, the MPAA alleges that IPG has somehow held back information relating to the better matching of claimed programs with compensable broadcasts. Nothing of the sort occurred. Both the MPAA's and SDC's *Motions to Strike IPG's Amended Direct Statement* argued that IPG had failed to identify the changes made to the filed original Direct Statement and AWDS. IPG responded and noted the line-by-line textual changes, which were not significantly affected. So, what the MPAA *really* complains of is why IPG did not give a more specific explanation as to Dr. Cowan's subjective belief as to the primary *cause* of changes to the resulting percentages which, as he opined in his declarations, was due to the improved matching of claimed programs and compensable broadcasts. However, IPG had no obligation to provide anything more than a generalized explanation for this processing error, and to provide the underlying database supporting the new calculations. To demonstrate, in the event that Dr. Cowan had *only* improved the matching of claimed programs and compensable broadcasts, i.e., an acknowledged non-methodological change, and IPG had revised its claimed percentages

pursuant to Section 351.4(b)(3) of the regulations, no requirement would have existed for IPG to provide *any* explanation beyond the submission of supporting data. Nevertheless, the MPAA argues that some greater level of explanation was required, and intentionally confuses what is required by Section 351.4(b)(3) versus Section 351.4(c) in order to fabricate that IPG has held back information. Dr. Cowan's generalized explanation and production of its supporting database satisfies IPG's obligations in connection with the processing error, and the MPAA accusation that information was held back is completely unsupported.

Finally, the MPAA again argues that IPG's changes must be considered "in context", citing revisions to Dr. Robinson's exhibits in the first round of these proceedings. Why Dr. Robinson's revisions to an entirely different methodology is relevant is not explained. Nonetheless, and as the Judges may recall, such revisions were first due to a good faith dispute as to the Judges' ruling from the claims hearing, then other revisions made by Dr. Robinson on her own initiative following the Judges clarification of matters while Dr. Robinson was on the stand the day prior. Literally no basis exists for the MPAA's naked accusation that revisions to the calculations of Dr. Robinson and Dr. Cowan's figures are for purposes of" aligning those conclusions with IPG's preconceived expectations." On the contrary, in each circumstance the revisions have resulted in a *reduction* in IPG's share. This circumstance is no different, and it is difficult to understand why the MPAA would argue that IPG must be wedded to *higher* IPG figures if for no reason other than to set such figures up for criticism later, during the rebuttal phase.

As for the SDC, it claims "prejudice" because IPG allegedly asserted an inconsistent position (i.e., IPG amended its claim) to "derive an unfair advantage or impose an unfair detriment on the opposing party." SDC br. at p. 5. But again, the SDC fail to even attempt to

explain what "unfair advantage" IPG ostensibly obtained by the seven-day delay in the presentation of its corrected Direct Statement, when all the electronic databases for both the original Direct Statement and AWDS were timely produced at the exact same time, and at the exact same time that the SDC produced its database. The SDC's failure to articulate is for obvious reason: there was no "unfair advantage" derived by IPG, nor was the amendment to Dr. Cowan's report made in order to obtain an "unfair advantage".[7]

Second, the SDC assert that it was "prejudiced" because it relied on the initial IPG satellite numbers - - for *seven* whole business days, and in order to submit a Notice of Consent that was *rejected* by the Judges. While the SDC keeps asserting in its opposition and other briefs that the SDC's reliance made the SDC "show its hand", no explanation is provided for this verbiage.[8] The Notice of Consent that was submitted by the SDC merely indicated that the SDC was willing to accept IPG's satellite royalty figures, which were less favorable to IPG than the SDC's satellite royalty figures. As such, literally no indication of the SDC's "super secret" settlement position was revealed. Rather, the SDC merely stated the obvious - - it would agree to terms more favorable to itself than its own figures justify.

Third, the SDC assert there was "prejudice" because of the mere fact that Dr. Cowan's

---

[7] Of course, the SDC's accusation is particularly hypocritical in light of its attempted "trial by ambush" in the 2000-2003 cable proceedings (Phase II), when the SDC attempted to first raise a methodology during the rebuttal phase of proceedings, *twelve months* following the filing of direct statements. IPG's identification of revisions at the earliest stage possible, even before the issuance of discovery, stands in stark contrast. In fact, the question is begged by the position of both the SDC and the MPAA as to how much earlier IPG would have had to present its corrected figures to be acceptable to those parties - - six business days after the initial filing, three, two, one?

[8] More of this irrational verbiage follows: "The estoppel cases cited above do not require that IPG has actually used its newfound advantage to harm SDC, it is enough the IPG now has a new and unfair point of leverage against SDC as a result of its conduct." What "unfair point of leverage" remains unidentified.

amended report changed the percentage claims, i.e., the mere fact that there was an amendment deems the existence of "prejudice". Obviously, according to the SDC argument, there could *never* be an amendment because there will always be "prejudice" to the adverse parties. Moreover, as part of its argument the SDC engage in an amazing mischaracterization, asserting that IPG has "refused" to produce documents responsive to its follow-up requests, neglecting to mention that its follow-up requests either go towards interim documents to which IPG did not object but that Dr. Cowan explained simply do not exist, or sought documents that were the subject of privilege. Indeed, IPG will not produce privileged documents, and will resist the SDC's specious explanation as to why IPG's privileges must be breached.

In reality, no "prejudice" has occurred. The MPAA and SDC received the data underlying the AWDS at the same time that it was due to receive data relating to the initial Direct Statement. Further, and as demonstrated by the SDC and MPAA briefs, no issue exists that either party has had an opportunity to review and understand Dr. Cowan's data and processes. What is truly at work is much more obvious, the SDC's and MPAA's desire to avoid a correct calculation of the Shapley valuation.[9]

C. THE SDC MAKES A VARIETY OF ARGUMENTS HAVING NO CLEAR RELEVANCE TO IPG'S MOTION.

The SDC challenge the statement that Dr. Cowan is presenting an analysis that has never been presented to the Judges. SDC br. at p. 7. As set forth in both his initial and amended reports, Dr. Cowan's analysis is a variant of a Shapley valuation, utilizing the information that is available. Nevertheless, the SDC mischaracterize Dr. Cowan's testimony to assert that he was saying that no analysis utilizing regressions has ever been presented to the Judges. This is

---

[9] The SDC challenges IPG's statement that Dr. Cowan has attempted to implement the Shapley valuation requested by the Judges, by disingenuously misquoting IPG's brief. See infra.

neither the statement nor meaning of Dr. Cowan's testimony, nor is its significance one way or the other explained. See IPG motion, Exh. B at para. 3 (Cowan decl.).

Next, hanging on a statement made in Dr. Cowan's declaration, the SDC state:

> "[T]he parties are entitled to an explanation for how Dr. Cowan's data files were generated and processed before he received them in order to evaluate whether these "errors" were not made by the economic experts, and whether the true persons preparing the files may have made any other errors, omissions, or changes."

SDC br. at p. 7.

As the SDC are well aware, discovery in these proceedings is limited to the issuance of document requests. Interrogatories are not allowed, nor depositions, nor subpoenas. As such, while the SDC proclaims its ostensible entitlement, it does not explain how such entitlement is to be practically fulfilled other than through discovery that is not sanctioned in the distribution proceedings, or how IPG has failed. No doubt, the SDC are entitled to query Dr. Cowan about such matters, *when it takes his testimony at an evidentiary hearing*, no differently than IPG is entitled to query Dr. Erdem and Dr. Gray on a variety of methodology-related issues, *when IPG takes their testimony at an evidentiary hearing*. Until an evidentiary hearing, however, there does not even exist a vehicle for the conveyance of the information that the SDC demands it is entitled to receive.

CONCLUSION

For the foregoing reasons, the Judges should grant IPG's *Motion to Amend Direct Statement*, and accept filing of the Amended Written Direct Statement attached as **Exhibit A** to its motion.

Respectfully submitted,

Dated: November 3, 2016

_____/s/_____
Brian D. Boydston, Esq.
California State Bar No. 155614

PICK & BOYDSTON, LLP
10786 Le Conte Ave.
Los Angeles, California 90024
Telephone: (213)624-1996
Facsimile: (213)624-9073
Email: brianb@ix.netcom.com

Attorneys for Independent Producers Group

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of November, 2016, a copy of the foregoing was sent by electronic mail to the parties listed on the attached Service List.

_____/s/_____
Brian D. Boydston

MPAA REPRESENTED PROGRAM SUPPLIERS

Gregory O. Olaniran, Esq.
Lucy Holmes Plovnick Esq.
Mitchell, Silberberg & Knupp LLP
1818 N Street, N.W., 8th Floor
Washington, D.C. 20036

SETTLING DEVOTIONAL CLAIMANTS:

Clifford M. Harrington
Matthew MacLean
Pillsbury, Winthrop, et al.
P.O. Box 57197
Washington, D.C. 20036-9997

EXHIBIT A

Before the
COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
Distribution of 2004, 2005, 2006, 2007,	)	Docket No. 2012-6 CRB CD 2004-2009
2008 and 2009 Cable Royalty Funds	)	(Phase II) (REMAND)
	)	
In the Matter of	)	
	)	
Distribution of 1999-2009 Satellite	)	Docket No. 2012-7 CRB SD 1999-2009
Royalty Funds	)	(Phase II) (REMAND)
	)	

DECLARATION OF DR. CHARLES COWAN

I, CHARLES COWAN, swear under penalty of perjury, that the following is true and

correct:

1. I am over twenty-one years of age, am of sound mind and suffer from no legal

disabilities. I am fully competent to testify to the matters set forth in this declaration. I have

personal knowledge of all the facts stated herein and am in all respects qualified to assert the

same. The contents of this declaration are true and correct.

2. I have now had the opportunity to review the assertions of Dr. Erdem and Dr.

Gray in declarations in opposition to IPG's Motion for Leave to File Amended Written Direct

Statement, and respond as follows:

3. Dr. Erdem states, paragraph 5 of his declaration, that "[e]ven if the data used in

the regressions for the Original and Amended Direct statements were unchanged . . . changing

only the functional form from a level-level regression to a log-linear regression would

necessarily lead to a different sets of coefficient estimates, different interpretation of coefficient

estimates, and different royalty shares based on his predictions." I agree. However, simply

1

adding a single variable to a linear regression (say, adding a fifth predictor to an original four predictors) would also result in changing only the functional form from a level-level regression to a log-linear regression would necessarily lead to a different sets of coefficient estimates, different interpretation of coefficient estimates, and different royalty shares based on the new predictions. Dr. Erdem would likely say this is a methodological change, even though it's the exact same methodology with one more variable. This is Dr. Erdem parsing too finely, and overextending his rationale. It remains a regression. How I introduce variables or transform variables doesn't change the "method".

4. In response to paragraph 7 of Dr. Erdem's declaration, while I understand that Dr. Erdem is concerned with the comparison of the R-squared values from a linear and a log-linear regression, the fact remains that the percent of variation explained is larger in the log-linear regression than the percent of variation explained in the linear regression, and therefore superior. I am relying on markers, not very well defined, to figure out where relationships might be found. At paragraph 8 of his declaration, Dr. Erdem quotes a textbook with which I am familiar for an irrelevant proposition. As far as a comparison of R-squared figures in similar contexts, the quoted text merely asserts that the better approach is not dictated purely by the R-squared figure. However, I never made such assertion. Rather, I observed that the differing figures for linear versus logarithmic percentages could not be that great because of the minor variation between the R-squared figures for both approaches.

5. In paragraph 10 of his declaration, Dr. Erdem states that my analysis is not a Shapley valuation. As set forth in both my initial and amended reports, I stated that my analysis is a variant of a Shapley valuation, i.e., approximations to the Shapley values utilizing the information that is available. Since there are no known marginal values, the regression estimates

2

the marginal values. These are the marginal values that go into a Shapley like computation to derive the relative marginal values. So, to clarify, I have never stated that I was doing exactly the Shapley analysis, and previously pointed out that the marginal values required for perfect computation didn't exist. Notwithstanding, I pointed out that one could compute the marginal values and conduct a Shapley-like analysis. Again, Dr. Erdem cites the precise wording offered by IPG instead of thinking through the implication of what the analysis does. As for the statement that Dr. Gray used regression analysis, I was not aware of this; however, this should allay any concern that regression is a novel concept in these proceedings.

6.   In paragraph 11 of his declaration, Dr. Erdem continues to parse my statements. Dr. Erdem provides a quote from paragraph 17 of my declaration, but purposely omits the opening sentence of the paragraph. As is evident from that introductory statement is that the paragraph was referring to the interpretation that one derives in a regression, which is that the coefficients are the marginal change in subscriptions (whether a percentage change or a unit change), after holding constant all the other predictor variables. The key in my statement is the marginal change - it holds constant everything else, which is what was supposed to be measured in the first place. Since I clearly stated that each scaling gives a measure of change, linear leading to a unit change, and log-linear leading to a percentage change, and Dr. Erdem "misleadingly" omits the first statement, one can only conclude I must have been referring to the general nature of the method, not the specifics of the formula.

7.   Finally, in paragraph 12 of his declaration, Dr. Erdem challenges my statement that the "method" did not change between my initial and amended reports is comparable to asserting that a Honda Civic is the same car as a Chevy Suburban simply because both are labeled "cars". Initially, I was not making nearly so generalized of an assertion to warrant Dr.

3

Erdem's misleading analogy. Even so, however, Dr. Erdem's analogy fails when you actually consider it closely. Dr. Erdem is not aware that the same assembly lines frequently produce different cars from different manufacturers - by simply sticking different logo plates on the back. A perfect example is the Mitsubishi 3000GT, made on the same assembly line and sold as the Dodge Stealth through a process known as "rebadging". So yes, I agree with Dr. Erdem; they ARE the same, even though they have different external badges and are sold by two completely different companies, different dealerships, different support structures. They are nonetheless the same under the hood.

8.   As regards Dr. Gray, in paragraph 4 of his declaration, Dr. Gray asserts that "in his opinion" as an economist, a linear to logarithmic change in approach is a methodological change. I disagree, and have attested to as much, but point out the significance of Dr. Gray's statement. First, it cites no texts or other authority for such a proposition, which obviously would exist if Dr. Gray's "opinion" was a truism. Further, Dr. Gray acknowledges that his assertion is an "opinion as an economist". The contrary is my opinion "as a statistician and mathematician" and, of course, the subject matter of my assertion is statistics.

9.   In paragraph 5 of his declaration, Dr. Gray says I should have reported the change in the royalty share calculations due solely to the change to log-linear. As should be obvious, however, I was not relying on the linear regression. The suggestion of Dr. Gray was that I was attempting to conceal some information when, in reality, in my professional opinion I believed that the comparison of the R-squared figures for linear versus logarithmic approach was a more useful figure to consider. However, there are more severe problems with the linear regression that Dr. Gray is aware of, but which he chooses to ignore. I describe these problems in detail below.

4

10.   In paragraph 7 of his declaration, Dr. Gray says that he finds the description of the methodology to be unclear. Nevertheless, he acknowledges that he was able to completely replicate everything. If he can repeat the steps and replicate everything, it is evident that my methodological description was sufficiently clear.

11.   In paragraph 8 and 9 of his declaration, Dr. Gray is partially correct in his computations, and it is true that I used only the R-squared statistics from the log-linear regression models to argue that there were not significant changes to the regressions. I also agree with Dr. Gray and his computations, using my spreadsheets. I agree with almost everything, *except* Dr. Gray's conclusions because there is one extraordinary problem with Dr. Gray's conclusions. The coefficients he uses from the linear regression are *negative*, a fact I previously disclosed in the materials I submitted regarding my initial report.

12.   Negative coefficients means that, for every IPG broadcast and for every MPAA broadcast, the more broadcasts shown from a source, the greater the loss in subscribers. Since both coefficients are negative, the ratio of a coefficient to the sum of coefficients is positive. But, it is measuring the relative proportion of subscribers lost, not gained. As such, Dr. Gray's table shows that every time that an MPAA program is broadcast relative to an IPG program, many more subscribers are lost, not gained. So while Dr. Gray's tables might be correct (I don't have his backup materials), it is not showing what he claims. What it shows is that programs for both suppliers are driving subscribers away in droves, a counterintuitive assertion.

13.   Almost every linear regression I ran as part of my analyses had negative coefficients, so since Dr. Gray is rerunning my analyses and using my processes, his coefficients must also be negative. I reran my analyses and obtained regressions that had the coefficients:

Linear Regression	Log-Linear

Devotional	Cable	Satellite	Cable	Satellite
IPG_progs	728.87	-420.48	0.02613%	0.21282%
SDC_progs	-220.80	-18,747.93	-0.00043%	0.40073%
Program Supplier				
IPG_progs	287.07	-1,887.43	0.01246%	0.07269%
MPAA_progs	2.81	-200.81	-0.00006%	0.00598%

14.   Dr. Gray failed to understand that this means that on a relative basis, programs for MPAA and IPG were likely to drive away subscribers if one uses a linear regression. This is a nonsensical outcome, driven by the shape of the data. Dr. Gray has the right calculations but has no idea what he's looking at.
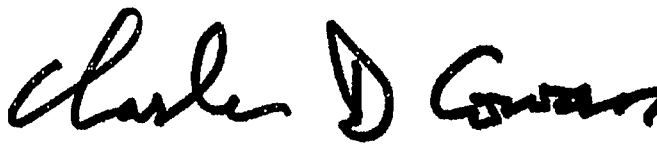
15.   With large coefficients and a large number of programs, it was possible to "predict" the number of subscribers for a particular call sign that had a very large number of MPAA programs and obtain a prediction of a negative number of subscribers. However, using the method used by Dr. Gray, for specific call signs and specific years, I calculate 24 call-sign:year predicted values (predictions of subscribers, not the change in subscribers) that are negative for the cable model, and 197 call-sign:year predicted values that are negative for the satellite model. Again, these are predictions of the numbers of subscribers for stations (call signs) within specific years. This explains why the logarithm approach gave more reasonable and acceptable results.

16.   It would now be possible to re-calculate the allocations under the linear model, but they would be nonsensical. The allocations would be the sum of the number of subscribers gained attributable to MPAA and to IPG. But Dr. Gray's own calculations would show that he is adding up both positive and negative numbers of subscribers. How does one add negative

subscribers to a total when there cannot be negative subscribers? Although it is possible to do this, as Dr. Gray did, it is grossly misleading and an improper calculation.

17. I considered this an "error" in the results of the regressions, which warranted a new look when I had the data corrections. The court should recognize that if the approach being used produces nonsensical results, then even after correcting the data, the use of a flawed approach should not be slavishly followed. This explains why the logarithm gave more reasonable and acceptable results and why it is the preferred approach.

DATED: November 3, 2016

By: _____
Dr. Charles Cowan